

## BIBLIOGRAPHY OF SCIENTIFIC PAPERS BY I. F. HAND

The preceding is the last paper prepared for the *Monthly Weather Review* by Mr. I. F. Hand in his capacity as head of the Weather Bureau Solar Radiation Field Testing Station located at Blue Hill. Mr. Hand retired on September 30, 1953 after 41½ years with the Weather Bureau, spent mainly in the field of solar radiation. Because his many articles are of continuing interest to other workers in the field of solar radiation, we are printing the following bibliography of Mr. Hand's principal articles published to date. In addition several miscellaneous articles have appeared in *Scientific American*, *American Motorist*, *New Mexico*, *Miniature Camera*, etc.

- |               |   |               |   |
|---------------|---|---------------|---|
| Sept.<br>1920 | "Distribution of Weather Forecasts, Warnings, and Information by Radio," <i>Monthly Weather Review</i> , vol. 48, No. 9, pp. 532-533.   |               |   |
| Sept.<br>1921 | "Sky Brightness and Daylight Illumination Measurements," with H. H. Kimball, <i>Monthly Weather Review</i> , vol. 49, No. 9, pp. 481-488.   | June<br>1928  | "Blue Sky Measurements at Washington, D. C.," <i>Monthly Weather Review</i> , vol. 56, No. 6, pp. 225-226.  |
| Dec.<br>1922  | "Daylight Illumination on Horizontal, Vertical, and Sloping Surfaces," with H. H. Kimball, <i>Monthly Weather Review</i> , vol. 50, No. 12, pp. 615-628.  | Jan.<br>1929  | "A Dense Smoke Cloud on January 3, 1929 at Washington, D. C.," <i>Monthly Weather Review</i> , vol. 57, No. 1, pp. 18-19.   |
| June<br>1923  | "An Examination of the Dust Content of the Atmosphere," <i>Bulletin of the American Meteorological Society</i> , vol. 4, No. 6-7, pp. 92-93.  | July<br>1929  | "Reflectivity of Different Kinds of Surfaces," with H. H. Kimball, <i>Monthly Weather Review</i> , vol. 57, No. 7, pp. 291-295.   |
| Mar.<br>1924  | "Investigation of Dust Content of the Atmosphere," with H. H. Kimball, <i>Monthly Weather Review</i> , vol. 52, No. 3, pp. 133-139.   | Nov.<br>1929  | "Utilization of Fixed Searchlights in Measuring Cloud Heights," <i>Monthly Weather Review</i> , vol. 57, No. 11, pp. 471-472.   |
| April<br>1924 | "Clouds and Other Observations from Airplanes," <i>Tycos-Rochester</i> , vol. XIV, No. 2, pp. 7, 23.  | July<br>1930  | "Reflectivity of Different Kinds of Surfaces," with H. H. Kimball, <i>Monthly Weather Review</i> , vol. 58, No. 7, pp. 280-282.   |
| May<br>1924   | "Destruction of an Aerial During a Thunderstorm," <i>Monthly Weather Review</i> , vol. 52, No. 5, pp. 270-271.  | Jan.<br>1931  | "What Was the Highest Temperature Today?," <i>Tycos-Rochester</i> , vol. XXI, No. 1, p. 15.   |
| May<br>1924   | "Investigation of the Dust Content of the Atmosphere," with H. H. Kimball, <i>Bulletin of the American Meteorological Society</i> , vol. 5, No. 5, pp. 67-69 (authors' summary and discussion).   | Sept.<br>1931 | "Investigation of the Dust Content of the Atmosphere," with H. H. Kimball, <i>Monthly Weather Review</i> , vol. 59, No. 9, pp. 349-352.   |
| April<br>1925 | "Effect of Local Smoke on Visibility and Solar Radiation Intensities," <i>Monthly Weather Review</i> , vol. 53, No. 4, pp. 147-148.   | Jan.<br>1933  | "The Magnitude of the Error in Measurements of the Solar Radiation Received on a Horizontal Surface Arising from the Assumption that the Ratio Between Radiant Energy Received and Electrical Energy Recorded is a Constant," with H. H. Kimball, <i>Monthly Weather Review</i> , vol. 61, No. 1, p. 4. |
| June<br>1925  | "Investigation of the Dust Content of the Atmosphere," with H. H. Kimball, <i>Monthly Weather Review</i> , vol. 53, No. 6, pp. 243-246.   | Mar.<br>1933  | "The Use of Glass Color Screens in the Study of Atmospheric Depletion of Solar Radiation," with H. H. Kimball, <i>Monthly Weather Review</i> , vol. 61, No. 3, pp. 80-83.   |
| Jan.<br>1926  | "A Study of the Smoke Cloud over Washington, D. C. on January 16, 1926," <i>Monthly Weather Review</i> , vol. 54, No. 1, pp. 19-20.   | June<br>1933  | "Mountain and Valley Atmospheric-Dust Measurements," <i>Monthly Weather Review</i> , vol. 61, No. 6, p. 169.  |
| May<br>1927   | "Blue Sky Measurements," <i>Monthly Weather Review</i> , vol. 55, No. 5, pp. 235-236.   | Oct.<br>1933  | "An Aid in Locating and Studying Clouds," <i>Monthly Weather Review</i> , vol. 61, No. 10, pp. 302-303.   |
| 1927          | "Bleaching of Methylene-Blue-Acetone-Water Solution by Ultra-Violet Radiation," with H. H. Kimball, <i>Bulletin of the National Research Council</i> , No. 61, pp. 123-125, Washington, D. C., 1927. ( <i>Transactions of the American Geo-</i> | May<br>1934   | "The Character and Magnitude of the Dense Dust-Cloud which Passed over Washington,  |

- D. C., May 11, 1934," *Monthly Weather Review*, Feb. 1942, vol. 62, No. 5, pp. 156-157.
- Sept. 1935 "Lightning Does Strike Twice in the Same Place," *Taylor-Tyco-Rochester*, vol. XXV, No. 3, p. 84.
- 1936 "The Intensity of Solar Radiation as Received at the Surface of the Earth and Its Variations with Latitude, Altitude, the Season of the Year and the Time of Day," with H. H. Kimball, Chapter V of *Biological Effects of Radiation*, McGraw-Hill Book Co., New York, 1936, pp. 211-226.
- Dec. 1937 "Review of the U. S. Weather Bureau Solar Radiation Investigations," *Monthly Weather Review*, vol. 65, No. 12, pp. 415-441.
- Sept. 1939 "Methods and Results of Ozone Measurements over Mt. Evans, Colo.," with Ralph Stair, *Monthly Weather Review*, vol. 67, No. 9, pp. 331-338.
- Sept. 1939 "Variation in Solar Radiation Intensities at the Surface of the Earth in the United States," *Monthly Weather Review*, vol. 67, No. 9, pp. 338-340.
- 1939 "Preliminary Measurements of Ozone over Mt. Evans, Colo.," with R. Stair, *Transactions of the American Geophysical Union*, Part III, 1939, pp. 338-340.
- April 1940 "An Instrument for the Spectroscopic Determination of Precipitable Atmospheric Water Vapor, and its Calibration," *Monthly Weather Review*, vol. 68, No. 4, pp. 95-98.
- Aug. 1940 "A Balanced Direct Current Amplifier for Alternating Current Use," with R. Stair, *Review of Scientific Instruments*, vol. 11, No. 8, pp. 257-259.
- Dec. 1940 "The Variability of the Thermoelectric Pyrheliometer Factor," *Monthly Weather Review*, vol. 68, No. 12, pp. 339-344.
- Apr. 1941 "A Summary of Total Solar and Sky Radiation Measurements in the United States," *Monthly Weather Review*, vol. 69, No. 4, pp. 95-125.
- May 1941 "The Characteristics of the Eppley Pyrheliometer," with B. S. Woertz, *Monthly Weather Review*, vol. 69, No. 5, pp. 146-148.
- June 1941 "A Stable Photoelectric Amplifier and Its Application in Ultraviolet and Ozone Studies," with R. Stair, *Bulletin of the American Meteorological Society*, vol. 22, No. 6, pp. 259-265.
- Sept. 1941 "Recalibration of Instrumental Equipment at Solar Radiation Stations," with Helen F. Cullinane, *Monthly Weather Review*, vol. 69, No. 9, pp. 262-264.
- 1941 "Preliminary Study of Radiation Penetration Through Snow," with R. E. Lundquist, *Proceedings, Central Snow Conference Dec. 11-12, 1941*, vol. 1, Michigan State College, East Lansing, 1941, pp. 42-44.
- "Observations of Radiation Penetration Through Snow," with R. E. Lundquist, *Monthly Weather Review*, vol. 70, No. 2, pp. 23-25.
- "A Plastic Snow-Tube," *Bulletin of the American Meteorological Society*, vol. 24, No. 3, p. 111.
- "Simultaneous Pyrheliometric Measurements at Different Heights at Mt. Washington, N. H.," with J. H. Conover and W. A. Boland, *Monthly Weather Review*, vol. 71, No. 5, pp. 65-69.
- "Transmission of the Total and the Infrared Component of Solar Radiation Through a Smoky Atmosphere," *Bulletin of the American Meteorological Society*, vol. 24, No. 5, pp. 201-204.
- "Neighbors to the Sun," *New Mexico*, Feb. 1944, pp. 9, 33-35.
- "Herbert Harvey Kimball (1862-1944)" [Obituary and bibliography of papers published] *Bulletin of the American Meteorological Society*, vol. 26, No. 5, pp. 188-191.
- "Solar Energy Received on a Vertical Surface Facing South," *Bulletin of the American Meteorological Society*, vol. 27, No. 7, p. 416.
- Pyrheliometers and Pyrheliometric Measurements*, U. S. Weather Bureau, Washington, D. C., 1946, 55 pp.
- "Preliminary Measurements of Solar Energy Received on Vertical Surfaces," *Transactions of the American Geophysical Union*, vol. 28, No. 5, pp. 705-712.
- "Solar Energy for House Heating," *Heating and Ventilating*, vol. 44, No. 12, pp. 80-94.
- "Sunshine," *Encyclopedia Britannica*, 1947 ed.
- "Atmospheric Contamination over Boston Massachusetts," *Bulletin of the American Meteorological Society*, vol. 30, No. 7, pp. 252-254.
- "Weekly Mean Values of Daily Total Solar and Sky Radiation," U. S. Weather Bureau *Technical Paper* No. 11, Washington, D. C. 1949, 17 pp.
- "Insolation on Clear Days at the Times of Solstices and Equinoxes for Latitude 42° N.," *Heating and Ventilating*, vol. 47, No. 1, pp. 92-94.
- "Measurements of Diffuse Solar Radiation at Blue Hill Observatory," with Frances A. Wolleston, U. S. Weather Bureau *Technical Paper* No. 18, Washington, D. C., 1952, 19 pp.
- "Distribution of Solar Energy over the United States," *Heating and Ventilating*, vol. 50 No. 7, pp. 73-75
- "Methods of Calculating Solar Radiation Values at Blue Hill Observatory, Milton, Mass.," *Monthly Weather Review*, vol. 82, No. 2, pp. 43-48.
- "Methods of Calculating the Amount of Solar Energy Impinging upon a Vertical Surface Facing South," (to be published).